

Work Order ID 139723

Wednesday, December 02, 2015 2:53:47 PM

139723

Page 1

Item ID: D2610-042

Accept

N900040100

Setup Start ***NS1***

Revision ID:

Stop ***NS2***

Item Name: Step, EC120 Step

Start Date: 12/2/2015 Start Qty: 2.00

2
2

Cust Item ID:

Required Date: 12/18/2015 Req'd Qty: 2.00

Customer:

Reference:

Approvals: Process Plan: JME

Date: 15-12-02

Tooling: _____ Date: _____

Run Start ***NR1***

QC: _____

Date: _____ SPC (Y/N): _____

Date: _____

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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Draw Nbr	Revision Nbr
D2610	Rev E
D2678	REV B

100

0.00

100

Large Fab

Large Fab

Large Fab

Memo

0.00

Deburr both ends and bevel aft end for welding

Drill top holes using Drill Jig DT 8171

Open as per Dwg D2678

Deburr holes

Mill cutout on sheet 3 of Dwg D2678 using Jig DT 8173 as a stopper 3 J.C. - L. 15/12/10

Drill bottom holes using Drill Jig DT 8172 and DT 8195

Open holes as per dwg

2

DEC 11 2015

DAS
24
9-89

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

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Page 2

Item ID: D2610-042

Accept

N900040100Setup Start ***NS1***

Revision ID:

Stop ***NS2***

Item Name: Step, EC120 Step

Start Date: 12/2/2015 Start Qty: 2.00

2

Cust Item ID:

Required Date: 12/18/2015 Req'd Qty: 2.00

2

Customer:

Reference:

Approvals:

Process Plan: _____

Date: _____

Tooling: _____

Date: _____

Run Start ***NR1***

QC: _____

Date: _____

SPC (Y/N): _____

Date: _____

Stop ***NR2***Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

110

QC5- Inspect part completeness to step on W/O

0.00

110

QC

Memo

0.00

Quality Control

DAS

9

9-89

120

Weld per dwg A/R Aluminum rod Batch: 131562 0.00***120***

Large Fab

Large Fab

Memo

0.00

Large Fab

Weld lugs. Use face of cutout as shown on Dwg.

Use D2678 to locate D2613, forward face of lug, using DT 8211 A.

Locate 2nd D2613 Lug off 1st using DT 8072

Weld D2734 end cap

Grind end cap welds flush

DAS

24

9-89

2

DEC 11 2015

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

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Reference:

Run	Start	*NR1*
	Stop	*NR2*

[illegible]

DQA: _____ Date: _____



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Page 4

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Revision ID: Stop ***NS2***
Item Name: Step, EC120 Step
Start Date: 12/2/2015 Start Qty: 2.00 ***2*** Cust Item ID:
Required Date: 12/18/2015 Req'd Qty: 2.00 ***2*** Customer:
Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
155	QC7-Inspect Chemical Conversion Coat	0.00							
155									
QC	Memo	0.00							
Quality Control									
160	Large Fab	0.00							
160									
Large Fab	Memo	0.00							
Large Fab	Inspect for foreign object per QSI 024								
	Install end plate D2683-041.								
	Position with location jig DT8071								
	Transfer drill 0.098 holes into D2683-041								
	Open holes to 0.128								
	Remove D2683-041								
	Deburr								
	Countersink .128 holes to .218 X100°								
	Touch up holes with alodine Assemble as per dwg								

DEC 11 2015

DEC 14 2015

DAS
24
9-89

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS <table style="width:100%; border: none;"> <tr> <td style="border: none;">Skid-tube ☐</td> <td style="border: none;">Cross tube ☐</td> <td style="border: none;">Water Jet ☐</td> <td style="border: none;">Engineering ☐</td> </tr> <tr> <td style="border: none;">Machining ☐</td> <td style="border: none;">Small Fab ☐</td> <td style="border: none;">Prod. Eng. Coord. ☐</td> <td style="border: none;">Quality ☐</td> </tr> <tr> <td style="border: none;">Thermoforming ☐</td> <td style="border: none;">Finishing ☐</td> <td style="border: none;">Rec/Store/Packaging ☐</td> <td style="border: none;">Other ☐</td> </tr> <tr> <td style="border: none;">Large Fab ☐</td> <td style="border: none;">Composite ☐</td> <td style="border: none;">Supplier ☐</td> <td></td> </tr> </table>				Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐																																																
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Wednesday, December 02, 2015 2:53:47 PM

Page 5

Accept

Setup Start *NS1*

Stop *NS2*

Start Date: 12/2/2015 **Start Qty:** 2.00 ***2***

Cust Item ID:

Required Date: 12/18/2015 **Req'd Qty:** 2.00 ***2***

Customer:

Reference:

Approvals: **Process Plan:** _____ **Date:** _____ **Tooling:** _____ **Date:** _____
QC: _____ **Date:** _____ **SPC (Y/N):** _____ **Date:** _____

Run	Start	*NR1*
	Stop	*NR2*

Operation Description

Set Up/ Run Hours

Tool ID	Tool #	Plan Code
---------	--------	-----------

Accept Qty	Reject Qty	Reject Number	Insp. Stamp

170

QC5- Inspect part completeness to step on W/O

0.00

170

QC

Memo

0.00

Quality Control

41 RW Pto →
15/12/18

180

Grey Sandtex(Ref:4.3.5.6) per QSI005 4.3

0.00

180

Powdercoat

Memo

0.00

Powder Coating

START TIME:

OVEN TEMPERATURE:

FINISH TIME:

190

Wing Walk as per dwg QSI005 4.4 Batch 1433500

5.000

190

HandFinish

Memo

0.00

Hand Finishing

1 of 15-12-21. DAS 34 000

12 of 20 15/12/2

DQA:

Date: 16.05.10



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: ~~PSA~~

Date: 16/04/09

Work Order update only ☐

Work Order: <u>139723</u> Part No. <u>D266-042</u> NCR No. <u>16-5754</u>		DISPOSITION Rework ☐ Scrap ☒ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS <table style="width:100%;"> <tr> <td>Skid-tube ☐</td> <td>Cross tube ☐</td> <td>Water Jet ☐</td> <td>Engineering ☐</td> </tr> <tr> <td>Machining ☐</td> <td>Small Fab ☒</td> <td>Prod. Eng. Coord. ☐</td> <td>Quality ☐</td> </tr> <tr> <td>Thermoforming ☐</td> <td>Finishing ☐</td> <td>Rec/Store/Packaging ☐</td> <td>Other ☐</td> </tr> <tr> <td>Large Fab ☐</td> <td>Composite ☐</td> <td>Supplier ☐</td> <td></td> </tr> </table>				Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☒	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐																																																	
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Found At inspection that the step is SCRAPED Due to having the part hole REWELDED after. Rivet was installed incorrectly. Re. Rivet gun is hard to handle and not used in same Parts before used in previous Parts.				SCRAP + Destroy No Repla D266-042. ----- Open CAR regarding issue CAR. # _____																																																																			
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Work Order ID 139723

Wednesday, December 02, 2015 2:53:47 PM

139723

Page 6

Item ID: D2610-042 Accept ***N900040100*** Setup Start ***NS1***
Revision ID: Stop ***NS2***
Item Name: Step, EC120 Step
Start Date: 12/2/2015 Start Qty: 2.00 ***2*** Cust Item ID:
Required Date: 12/18/2015 Req'd Qty: 2.00 ***2*** Customer:
Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
200	QC3- Inspect Part Finish	0.00							
200									DAS
QC	Memo	0.00							9
Quality Control									9-89
210	Identify as per dwg & Stock Location: _____	0.00							
210									DAS
Packaging	Memo	0.00							28
Packaging									9-89
									DEC 21 2015
220	QC21- Final Inspection - Work Order Release	0.00							
220									
QC	Memo	0.00							
Quality Control									

Signature 2015 12 24

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

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Page 1

Work Order ID: 139723
Parent Item: D2610-042
Parent Item Name: Step, EC120 Step

139723
D2610-042

Start Date: 12/2/2015 Required Date: 12/18/2015
Start Qty: 2.00 Required Qty: 2.00

Comments: IPP H00.07.20Added inspection for QSI 024EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D2613 *D2613* Lug, Ec 120 Step		Manufactured	No			100	Each	214.0000	2	4		DEC 2 1 2015	DAS 24 9-89
				<u>Location</u>				<u>Loc Qty</u>					
				Mezz				214					
				15004				36					
				15005				178					
D2622-120C *D2622-120C* Step Extrusion		Manufactured	No			110	Each	123.0000	1	2		DEC 2 1 2015	DAS 24 9-89
				<u>Location</u>				<u>Loc Qty</u>					
				WA003				123					
				130161				5					
				134783				118					
D2669-45 *D2669-45* End Plate		Manufactured	No				Each	3.0000		2		DEC 2 1 2015	DAS 24 9-89
				<u>Location</u>				<u>Loc Qty</u>					
				WA003				3					
				137402				3					
D2674-3 *D2674-3* Nut Plate		Manufactured	No			100	Each	56.0000	1	2		DEC 2 1 2015	DAS 24 9-89
				<u>Location</u>				<u>Loc Qty</u>					
				Mezz				56					
				15110				56					

B139727 → 6

282

3

2

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE



QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date :	Step #:	QTY Effective :		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY			
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐	
OTHER : ☐					

Picklist Print

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Page 2

Work Order ID: 139723

Parent Item: D2610-042

Parent Item Name: Step, EC120 Step

139723

D2610-042

Start Date: 12/2/2015

Required Date: 12/18/2015

Start Qty: 2.00

Required Qty: 2.00

D2682-041	Manufactured	No	100	Each	73.0000	1	2			
D2682-041										
Support Plate, EC 120 Step										

**

DEC 2 1 2015

DAS
24
9-89

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
Mezz	73	
15393	40	
15738	33	

2

D2683-041	Manufactured	No	100	Each	51.0000	1	2			
D2683-041										
End Plate, EC 120 Step										

**

DEC 2 1 2015

DAS
24
9-89

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
Mezz	51	
15168	15	
15506	36	

2

M7885/3-4-4	Purchased	No	100	Each	92.0000	5	10			
M7885/3-4-4										
Rivets										

**

DEC 2 1 2015

DAS
24
9-89

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
ST557	2	
108077	2	
ST567	90	
m133694	90	

10

MS20426AD3-5	Purchased	No	100	Each	5,015.000	2	4			
MS20426AD3-5										
Rivet										

**

DEC 2 1 2015

DAS
24
9-89

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
GA	4184	
4533	4184	
ST312	831	
4444	831	

4

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Page 2

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

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Page 3

Work Order ID: 139723

139723

Parent Item: D2610-042

D2610-042

Parent Item Name: Step, EC120 Step

Start Date: 12/2/2015

Required Date: 12/18/2015

Start Qty: 2.00

Required Qty: 2.00

MS24693-C272

Purchased

No

100

Each

1,084.000

2

4

MS24693-C272

Screw

DEC 21 2015

DAS
24
9-89

Location

Loc Qty

Loc Code

cck007a

986

17137

467

17831

519

ST287

98

9370

98

MS27039-1-09

Purchased

No

100

Each

155.0000

2

4

MS27039-1-09

Screw

DEC 21 2015

DAS
24
9-89

Location

Loc Qty

Loc Code

FP001

34

18057

34

GA

36

124859

36

ST0285

45

125646

45

ST285

40

124859

29

m130388

11

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Page 3

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

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OTHER :																																																																				

Picklist Print

Wednesday, December 02, 2015 2:53:47 PM

Page 4

Work Order ID: 139723

139723

Parent Item: D2610-042

D2610-042

Parent Item Name: Step, EC120 Step

Start Date: 12/2/2015

Required Date: 12/18/2015

Start Qty: 2.00

Required Qty: 2.00

NAS1149D0332J

Purchased

No

100

Each

1,897.000

2

4

NAS1149D0332.J

DEC 21 2015

DAS
24

Washer

09

Location

Loc Qty

Loc Code

CA

14

m129682

14

FP001

72

m129682

72

GA

357

m132677

357

ST264

1454

m133498

1454

4

Wednesday, December 02, 2015 2:53:47 PM

Shop Packet Print

Page 4

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐																																																													
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Misidentified ☐	Past Due ☐																																																																



DESIGN <i>KE</i>	DRAWN BY <i>KE</i>	DART AEROSPACE LTD VICTORIA INTERNATIONAL AIRPORT, CANADA	
CHECKED <i>my</i>	APPROVED <i>KE</i>	DRAWING NO. D2610	REV. E SHEET 1-OF-2
DATE 97.09.18		TITLE EC120 STEP ASSEMBLY	SCALE NTS
A	96.10.22	ORIGINAL ISSUE	
B	97.01.14	HAND DRAWING	
C	97.05.09	REVISED MOUNTING LUGS	
D	97.06.04	REVISED FWD END OF STEP	
E	97.09.18	ADDED NUT PLATE	

RELEASED
970125 KE
TSR A450

EFFECTIVE	DEOs
9083	

Qty -041	Qty -042	Part Number	Description
X		D2610-041	STEP ASSEMBLY LH
	X	D2610-042	STEP ASSEMBLY RH
1	1	D2674-3	NUT PLATE
1		D2678-041	STEP WELDMENT LH
	1	D2678-042	STEP WELDMENT RH
1	1	D2682-041	SUPPORT PLATE
1	1	D2683-041	END PLATE
2	2	AN960JD10L	WASHER
2	2	MS20426AD3-5	RIVET
2	2	MS24693-S272*	SCREW
2	2	MS27039-1-09	SCREW
5	5	M7885/3-4- 2 4	RIVET (OR CR3212-4- 2 4)

TSR 1341

00.10.12
CP 00.10.12

*MS24693-C272 SCREWS MAY BE SUBSTITUTED FOR MS24693-S272 SCREWS

DEO's	9083 97/10/02 KE								
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DQA: _____ Date: _____



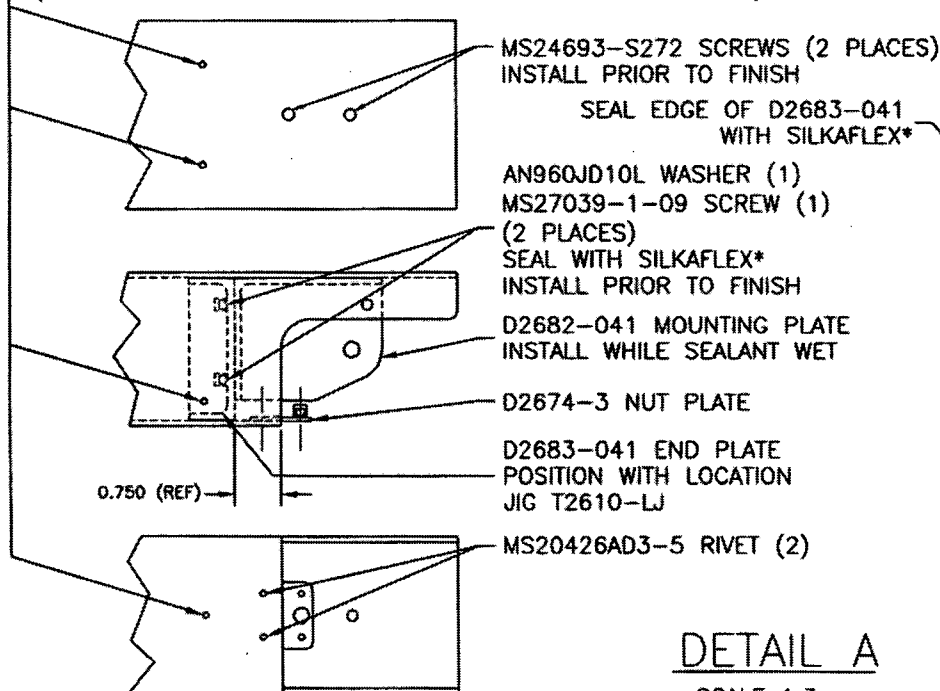
WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

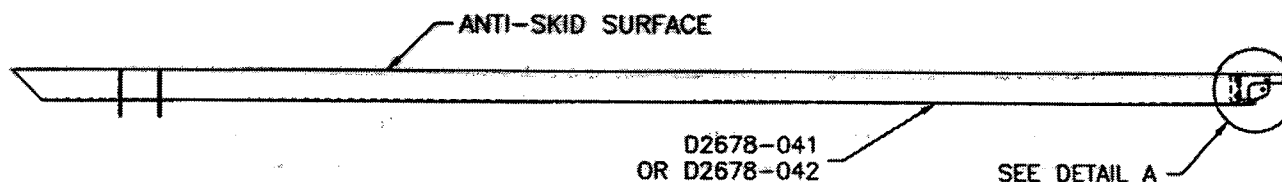
Work Order update only ☐

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Date :	Step #:	QTY Effective :		MRB (QS1042) Approval	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
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OTHER : ☐					

Ø0.128 TRANSFER HOLES FROM STEP
C'SINK Ø0.216 x 100°
M7885/3-4-4 (CR3212-4-4) RIVET (5)
(TOUCH UP WITH ZINC CHROMATE PRIMER PER QSI 005 4.2)



DETAIL A
SCALE 1:3



D2610-041 SHOWN (L.H.) (USE D2678-041 WELDMENT)
D2610-042 OPPOSITE (R.H.) (USE D2678-042 WELDMENT)

FINISH: - PRIME PER QSI 005 4.2
OR

- POWDER COAT ASSEMBLY TO CUSTOMER SPEC AS PER QSI 005 4.3
- ANTI-SKID TOP PER QSI 005 4.4 (MASK TO BOTTOM OF RADIUS)
- OR
- PAINT ASSEMBLY TO CUSTOMER SPEC AS PER QSI 005 4.2.
- ANTI-SKID TOP PER QSI 005 4.4 (MASK TO BOTTOM OF RADIUS)

*NOTE: SILKAFLEX-241 ADHESIVE
PER MANUFACTURER'S SPECIFICATION
POSSIBLE VENDOR: PAYNE'S MARINE SUPPLY

RELEASED
470925 KE
TSR 4450

DART



DESIGN	KE	DRAWN BY	KE	DART AEROSPACE LTD VICTORIA INTERNATIONAL AIRPORT, CANADA
CHECKED	DM	APPROVED	DM	
DATE	97.09.18	DRAWING NO.	D2610	REV. E
		TITLE	EC120 STEP ASSEMBLY	SHEET 2 OF 2
				SCALE 1:15

DQA: _____ Date: _____



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Work Order update only ☐

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Root Cause		FAULT CATEGORY																																																																																																																																																	
Environment	☐	No Re-verification	☐	Pressure/Forced	☐	Temperature/Cure	☐	Power Loss/Surge	☐	Positioned Wrong	☐																																																																																																																																								
Design	☐	Operator	☐	Bending	☐	Set-up	☐	Folio/Program	☐	Outside Dimensions	☐																																																																																																																																								
Doc/Data	☐	Offset/Setup	☐	Centre Not Concentric	☐	BOM/Route	☐	Grain	☐	Over/Under tolerance	☐																																																																																																																																								
Equip/Tooling	☐	Supplier	☐	Cracks	☐	Broken/Damage/Defect	☐	Weld	☐	Part Incorrect	☐																																																																																																																																								
Handling/Pre	☐	Training	☐	Crimp/Kink/Ripple/Wave	☐	Inspection Incomplete/Unqualified	☐	Wrong Stock Pulled	☐	Part Lost/Missing	☐																																																																																																																																								
Material	☐	Use for Testing	☐	Cuffs	☐	Contamination	☐	Out of Sequence	☐	Part Moved	☐																																																																																																																																								
Internal Transport	☐	Poor Information	☐	Crushing	☐	Countersink	☐	Off-set	☐	Drawing	☐																																																																																																																																								
Tribal Knowledge	☐	Rushing	☐	Heat Treat	☐	Cut Too Short	☐	Mislabeled	☐	Finish	☐																																																																																																																																								
LOA	☐	Product Improvement	☐	Wave/Twist in Tube	☐	Instructions Incomplete/Unclear	☐	Fit/Function	☐	Misread	☐																																																																																																																																								
Substation	☐	Process Improvement	☐	Marks/Chatter	☐	Drill Holes	☐	Misaligned/off center	☐	Turning Sequence	☐																																																																																																																																								
Past Expiry Date	☐	Manufacturing Process	☐	OTHER :																																																																																																																																															
Misidentified	☐	Past Due	☐																																																																																																																																																